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In accordance with the Patents (Companies Re-registration) Rules 1982, if a company named in this certificate and any accompanying documents has re-registered under the Companies Act 1980 with the same name as that with which it was registered immediately before re-registration save for the substitution as, or inclusion as, the last part of the name of the words "public limited company" or their equivalents in Welsh, references to the name of the company in this certificate and any accompanying documents shall be treated as references to the name with which it is so re-registered.

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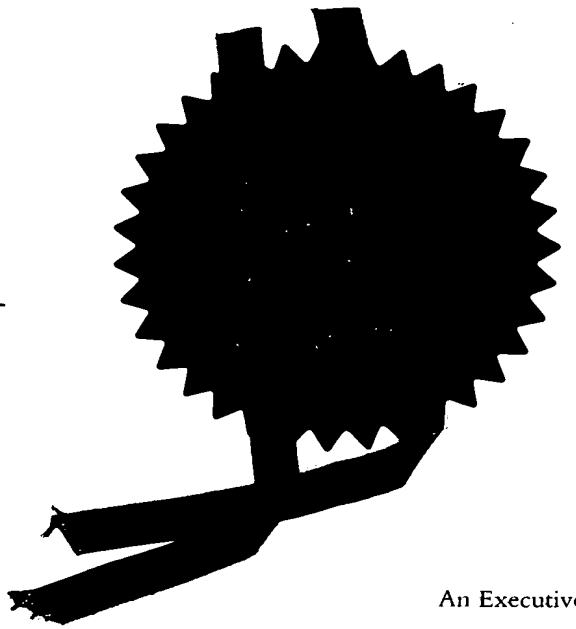

Signed R J Sanders

Dated 17.9.98

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Request for grant of a patent

(See the notes on the back of this form. You can also get an explanatory leaflet from the Patent Office to help you fill in this form)

The Patent Office

Cardiff Road
Newport
Gwent NP9 1RH

1. Your Reference — **SAL/KG/PG3361**

2. Patent application number *(The Patent office will fill in this part)* — **9719774.3**

18 SEP 1997

3. Full name, address and postcode of the or of each applicant *(underline all surnames)* — **GLAXO GROUP LIMITED**
GLAXO WELLCOME HOUSE
BERKELEY AVENUE
GREENFORD
MIDDLESEX
UB6 ONN
GB

Patents ADP number *(if you know it)* — 4735870002

If the applicant is a corporate body, give the country/state of its corporation — **GB**

4 Title of the invention — **DEVICE**

5 Name of your agent *(if you know one)* — **STEPHANIE ANNE LEAROYD (SEE CONTINUATION SHEET)**

"Address for service" in the United Kingdom to which all correspondence should be sent *(including the postcode)* —
GLAXO WELLCOME PLC
GLAXO WELLCOME HOUSE, BERKELEY AVENUE
GREENFORD, MIDDLESEX
UB6 ONN, GB

Patents ADP number *(if you know it)* — 6931703002

6. If you are declaring priority from one or more earlier patent applications, give the country and date of filing of the or of each of these earlier applications and *(if you know it)* the or each application number

Country	Priority application number *(if you know it)*	Date of Filing (day / month / year)

7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application	Date of filing (day / month / year)

8. Is a statement of inventorship and of right to grant a patent required in support of this request? *(Answer yes if:*
a) any applicant named in part 3 is not an inventor, or
b) there is an inventor who is not named as an applicant, or
c) any named applicant is a corporate body.
See note (d)) — **YES**

Patents Form 1/77

9. Enter the number of sheets for any of the following items you are filing with this form. Do not count copies of the same document

Continuation sheets of this form	1
Description	4 ✓
Claim(s)	2 ✓
Abstract	-
Drawing(s)	2 + 2 ✓

10. If you are also filing any of the following, state how many against each item

Priority Documents	
Translations of priority documents	
Statement of inventorship and right to grant of a patent *(Patents Form 7/77)*	
Request for preliminary examination and search *(Patent Form 9/77)*	
Request for substantive examination *(Patent Form 10/77)*	
Any other documents *(please specify)*	

11. **I/We request the grant of a patent on the basis of this application**

Signature **STEPHANIE ANNE LEAROYD** **17 September, 1997**
AGENT FOR THE APPLICANTS

12. Name and daytime telephone number of person to contact in the United Kingdom

TINA CARTY
0181-966 8685

Warning

After an application for a patent has been filed, the Comptroller of the Patent Office will consider whether publication of communication of the invention should be prohibited or restricted under Section 22 of the Patents Act 1977. You will be informed if it is necessary to prohibit or restrict your invention in this way. Furthermore, if you live in the United Kingdom, Section 23 of the patent Act 1977 stops you from applying for a patent abroad without first getting written permission form the Patent Office unless an application has been filed at least 6 weeks beforehand in the United Kingdom for a patent for the same invention and either no direction prohibiting publication or communication has been given, or any such direction has been received

a) *Notes*

If you need help to fill in this form or you have any questions, please contact the Patent Office on 0645 500505.

b) *Write your answers in capital letters using black ink or you may type them.*

c) *If there is not enough space for all the relevant details on any part of this form, please continue on a separate sheet of paper and write "see continuation sheet" in the relevant part(s). Any continuation sheet should be attached to this form*

If you have answered "Yes" Patents Form 7/77 will need to be filed.

d) *Once you have filled in the form you must remember to sign and date it.*

e) *For details of the fee and ways to pay please contact the Patent Office.*

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(See Page 1 No. 5)

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DEVICE

The present invention relates to a device capable of accommodating a plurality of reaction vessels being specifically adapted so that when placed in a magnetic field, such as that generated by a laboratory magnetic stirrer, any reaction vessel accommodated by the device is in an effective position for stirring with respect to the magnetic field.

In the field of organic chemistry it is often desirable to perform a variety of related chemical reactions simultaneously under similar reacting conditions. The technique for performing such reactions simultaneously is known as parallel synthesis.

One of the problems associated with carrying out parallel syntheses in the laboratory is that the majority of existing laboratory magnetic stirrers are only designed to accommodate and efficiently stir the contents of one reaction vessel at any one time. Accordingly, such equipment is not suitable for use in parallel synthesis.

Laboratory magnetic stirrers specifically designed for use in parallel synthesis are known. However, such apparatus, conventionally known as parallel reaction stations are only available as complete units incorporating a source of magnetic flux together with a frame for accommodating reaction vessels. These units are very costly in comparison to laboratory magnetic stirrers. The present device is advantageous over known devices in that it allows a conventional magnetic stirrer to be used for parallel synthesis and hence provides significant economic advantages compared with parallel reaction stations.

A means has now been found which permits the use of existing laboratory magnetic stirrers in parallel syntheses by providing a device which is capable of securely accommodating a plurality of reaction vessels said device being specifically adapted so that when correctly located within a magnetic field generated by a laboratory magnetic stirrer each and every reaction vessel is effectively positioned for stirring with respect to the magnetic field. Thereby, any

reaction vessel, placed in the device and equipped with a magnetic stir bar, is subject to smooth and efficient agitation.

Thus, the present invention provides a device comprising an adapter block, the adapter block containing a plurality of sockets each designed to securely accommodate a reaction vessel, wherein when the adapter block is co-operatively positioned within a magnetic field generated by a laboratory magnetic stirrer, each and every socket is effectively positioned for stirring with respect to the magnetic field.

Optionally the device may incorporate guide means which engage with the laboratory magnetic stirrer thereby ensuring the adapter block is correctly located within the magnetic field of the laboratory magnetic stirrer such that each and every socket designed to securely accommodate a reaction vessel is effectively positioned for stirring with respect to the magnetic field. Preferably, the guide means comprises a raised rim around a central recess.

The adapter block may be cast in any suitable form, however in a particularly preferred arrangement the adapter block is circular in shape. The adapter block may be used in co-operation with any laboratory magnetic stirrer with a suitable circular magnetic/hotplate. Preferred laboratory stirrers include the IKA RCT basic hotplate stirrers, the IKAMAG REO, the Heidolph MR3001, the Heidolph MR3002, and the Heidolph MR3000.

The sockets for securely accommodating the reaction vessels may be located at any position on the device in which they are effectively positioned for stirring with respect to the magnetic field. In a particularly preferred arrangement the sockets are arranged about the circumference of the adapter block.

Preferably the adapter block is made of chemically resistant material for example PTFE or a metal such as aluminium or stainless steel.

The adapter block may optionally be constructed from heat conducting material for example aluminium stainless steel. Thereby, when the device is used in co-

operation with a hotplate/magnetic stirrer heat generated by the hotplate will be efficiently transferred to the reaction vessels accommodated by the device.

Preferably the adapter block will incorporate a gas manifold. Thereby, gas flow or vacuum supply to each of the reaction vessels may be individually controlled. The gas manifold may be located anywhere on the device, however in a particularly preferred arrangement the gas manifold is located at the centre of the parallel reaction station.

The adapter block is capable of being constructed to accommodate any size laboratory reaction vessel however 16 and 24 mm o.d. test tubes are particularly preferred.

Optionally the device may incorporate a condenser unit such that the contents of the reaction vessels may be heated to reflux. The condenser unit will be assembled such that the unit is in direct contact with the reaction vessels as they project from the adapter block. Preferably the condenser unit will be constructed from a material of high specific heat capacity for example stainless steel however the unit may be water cooled.

Preferred embodiments of the invention are described in detail below, by example only, with reference to the accompanying drawings, wherein:

Figure 1 is a perspective view of the adapter block working in co-operation with a laboratory magnetic stirrer.

Figure 2 is a perspective view of the adapter block together with a condenser unit working in co-operation with a laboratory magnetic stirrer.

The device illustrated in figure 1 comprises the adapter block (1) which is constructed from PTFE and is circular in shape with sockets (2) suitable for securely accommodating the test tube reaction vessels (3) located about the circumference of the device. One face of the device is equipped with a recess whereby the stirrer plate of the magnetic stirrer (5) is secured within the recess

thereby ensuring that the device is effectively located for stirring within the magnetic field. A gas manifold (4) is located at the centre of the adapter block.

The device shown in fig. 2 comprises an adapter block (11) and a condenser unit (12) both of which are constructed from aluminium and are circular in shape. The adapter block comprises sockets (13) located about the circumference of the device suitable for accommodating the test tube reaction vessels (14). The condenser unit contains openings (15) through which the test tube reaction vessels pass. The adapter block and condenser unit are substantially parallel to one another. One face of the adapter block is equipped with a recess whereby the hotplate of a hotplate/magnetic stirrer (16) may be secured within the recess thereby ensuring that the adapter block is effectively located within the magnetic field. A gas manifold (17) is located at the centre of the adapter block.

In an additional embodiment of the invention the device comprises an adapter block as described hereinbefore wherein the device is permanently fixed to a laboratory magnetic stirrer.

CLAIMS

The application of which this description and claims forms part may be used as a basis for priority in respect of any subsequent application. The claims of such subsequent application may be directed to any feature or combination of features described herein. They may include, by way of example and without limitation, one or more of the following claims:

1. A device comprising an adapter block, the adapter block containing a plurality of sockets each designed to securely accommodate a reaction vessel, wherein when the adapter block is co-operatively positioned within a magnetic field generated by a laboratory magnetic stirrer each and every socket is effectively positioned for stirring with respect to the magnetic field.

2. A device according to claim 1 wherein the adapter block incorporates guide means to ensure that the device is effectively positioned with respect to the laboratory magnetic stirrer's magnetic field.

3. A device according to claim 2 wherein the adapter block is made of chemically resistant material.

4. A device according to claim 3 wherein the adapter block is made of heat conducting material.

5. A device according to claim 4 wherein the device incorporates a condenser unit.

6. A device according to claim 5 wherein the adapter block is circular in shape

7. A device according claim 6 wherein the sockets are arranged about the circumference of the device.

8. A device according to any preceding claim wherein the adapter block incorporates a gas manifold.

9. A magnetic hotplate magnetic stirrer securely fitted with an adapter block wherein the adapter block contains a plurality of sockets each designed to securely accommodate a reaction vessel, and wherein the adapter block is positioned within the magnetic field generated by the laboratory hotplate magnetic stirrer such that each and every socket is effectively positioned for stirring with respect to the magnetic field.

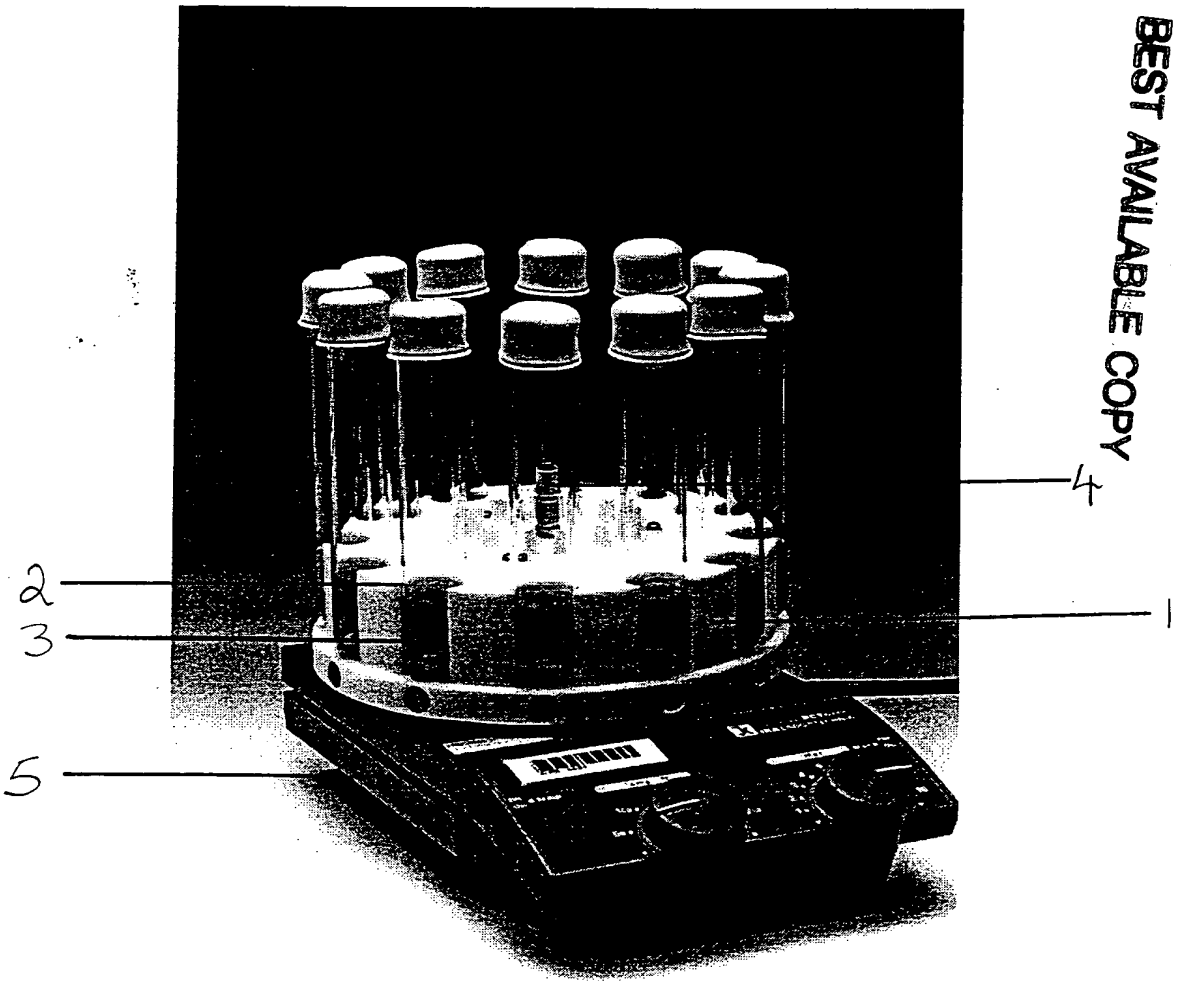

figure 1.

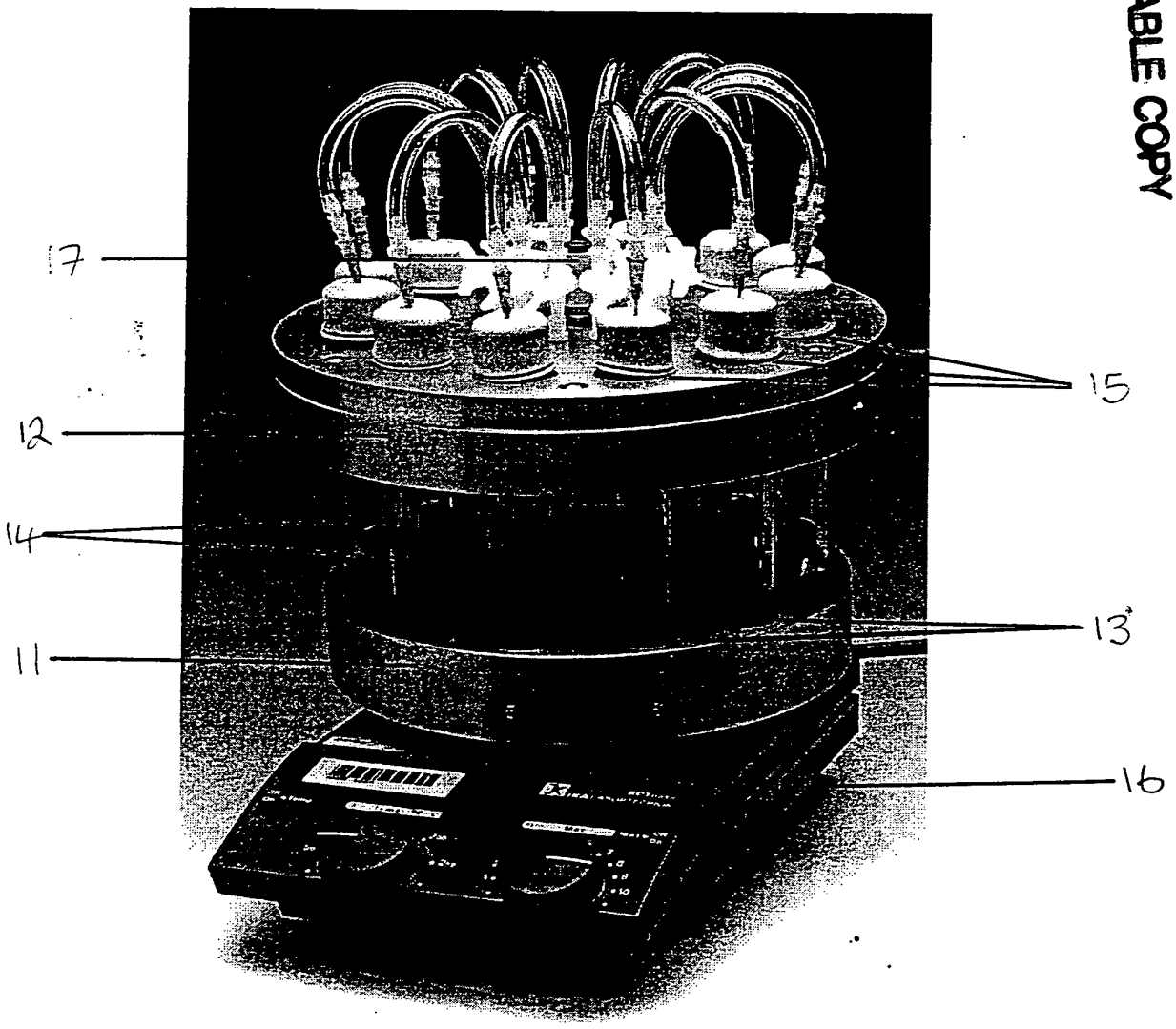

figure 2

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